

### **Absrtact**

A thin-film solar cell comprises a set of a transparent conductive layer and a photoelectric conversion layer laminated in this order on a substrate, wherein the photoelectric conversion layer is made of a p-i-n  
5 junction, the i-layer is made of a crystalline layer and the transparent conductive layer is provided with a plurality of holes at its surface of the side of the photoelectric conversion layer, each of said holes having irregularities formed on its surface.